

## Worksheet 9.3: Trapezoids

Exercise 1- 8 refer to trapezoids. Complete the table.

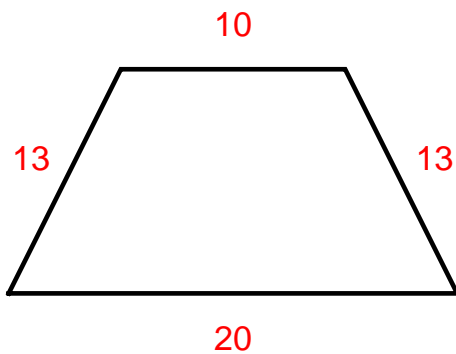
	1.	2.	3.	4.	5.	6.	7.	8.
$b_1$	16	8	10.4	45	36	5	14	
$b_2$	24	12	6.2	15	9			$6x$
$h$	8	6.4	2.6			5	$18\sqrt{2}$	$10x$
$A$				300	144	50	$72\sqrt{2}$	$90x^2$

9. Find the lengths of the medians in the trapezoids in exercises 1-8.

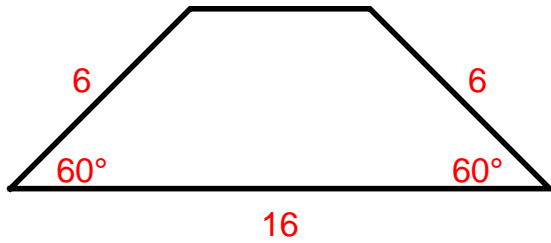
10. A trapezoid has area 108 and height 12. What is the length of its median?

Find the area of each trapezoid.

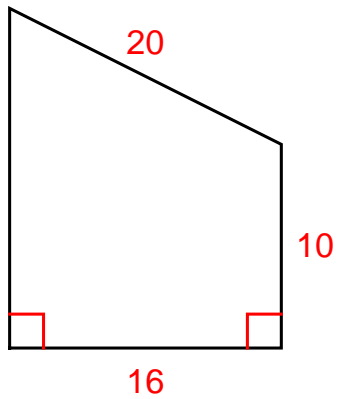
11.



12.



13.



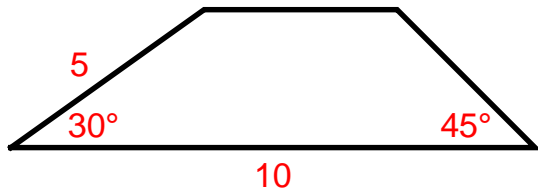
14. The legs of an isosceles trapezoid are 10 units in length and the bases are 9 units and 21 units.

(a) Find the area of the trapezoid.

(b) Find the lengths of the diagonals.

15. An isosceles trapezoid with bases 24 and 32 is inscribed in a circle with radius 20. The center of the circle lies in the interior of the trapezoid. Find the area of the trapezoid.

16. Find the area of the trapezoid shown below.



17. An isosceles trapezoid with bases 6 and 14 has area 150.

(a) Find the height.

(b) Find the perimeter.